

# Plan Actions and 2021 Priorities of the NRU Subcommittee

Galveston Bay Estuary Program



# Galveston Bay Plan NRU Goals

1. *GBP'95* Goal: 15,000 acres over 10 years

- 1,400 acres of SAV
- 5,000 acres of freshwater marsh
- 8,600 acres of estuarine marsh

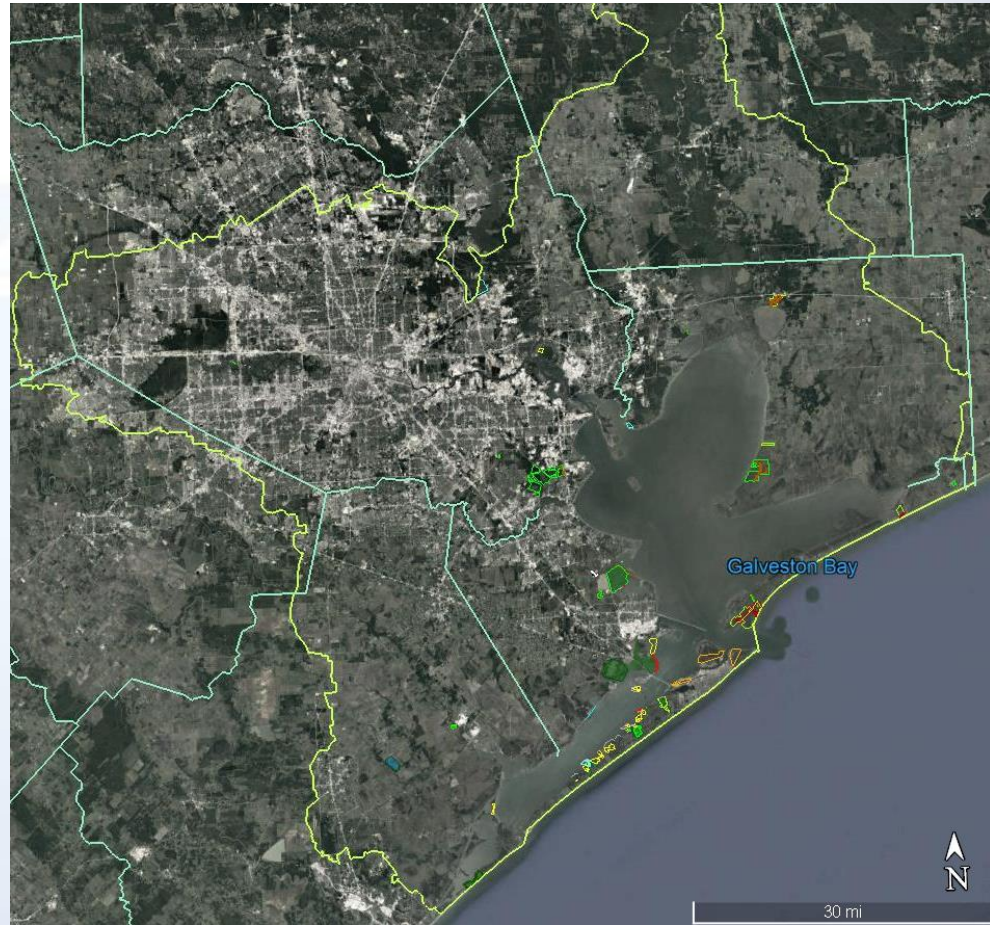
2. *2009 Strategic Action Plan* Goal: 10,000 acres

- 2,500 acres conserved (acquisition/easement)
- 2,500 acres protected (erosion control)
- 5,000 acres restored/enhanced

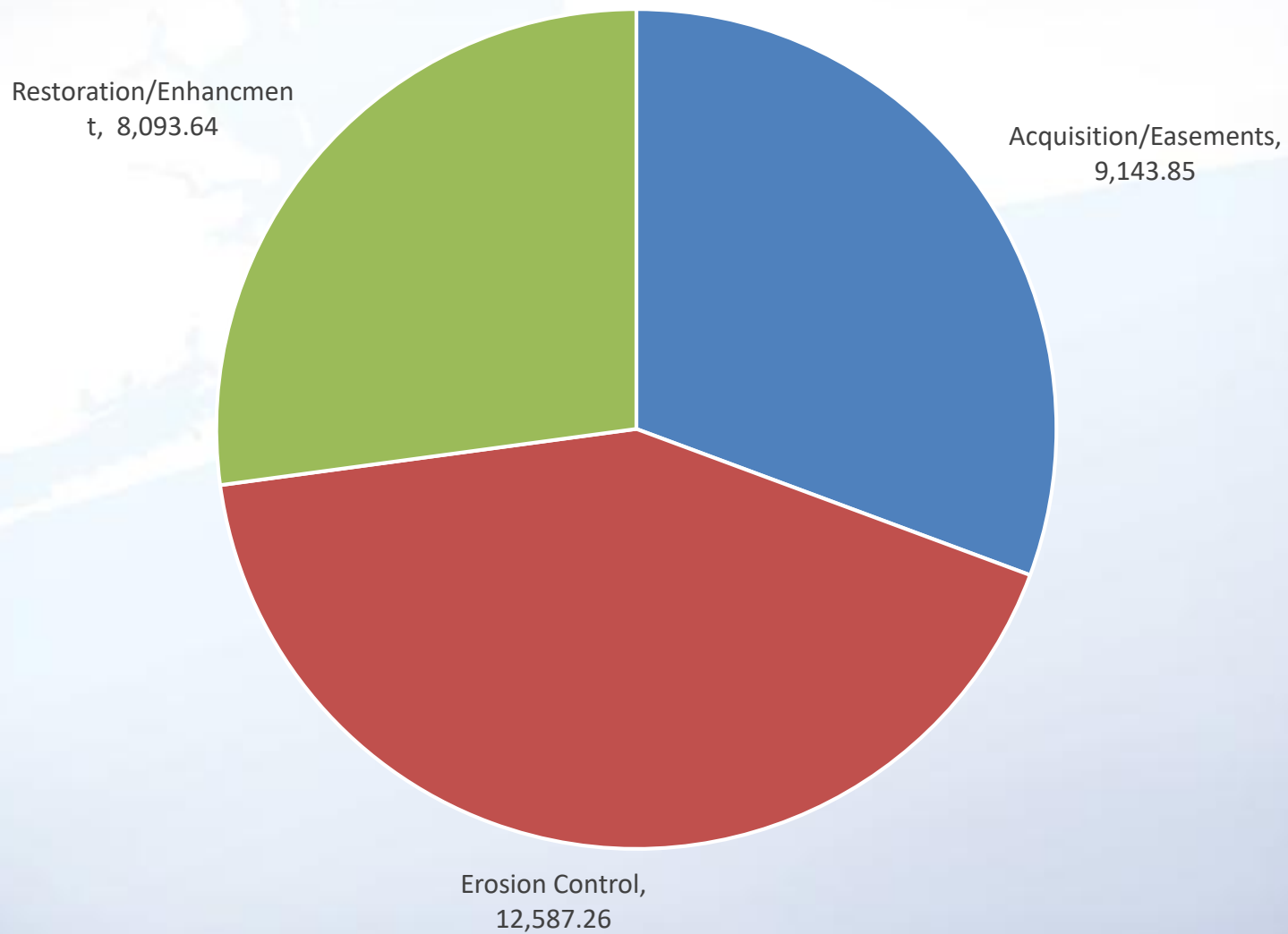
# NRU Results

Since 2000, NRU has:

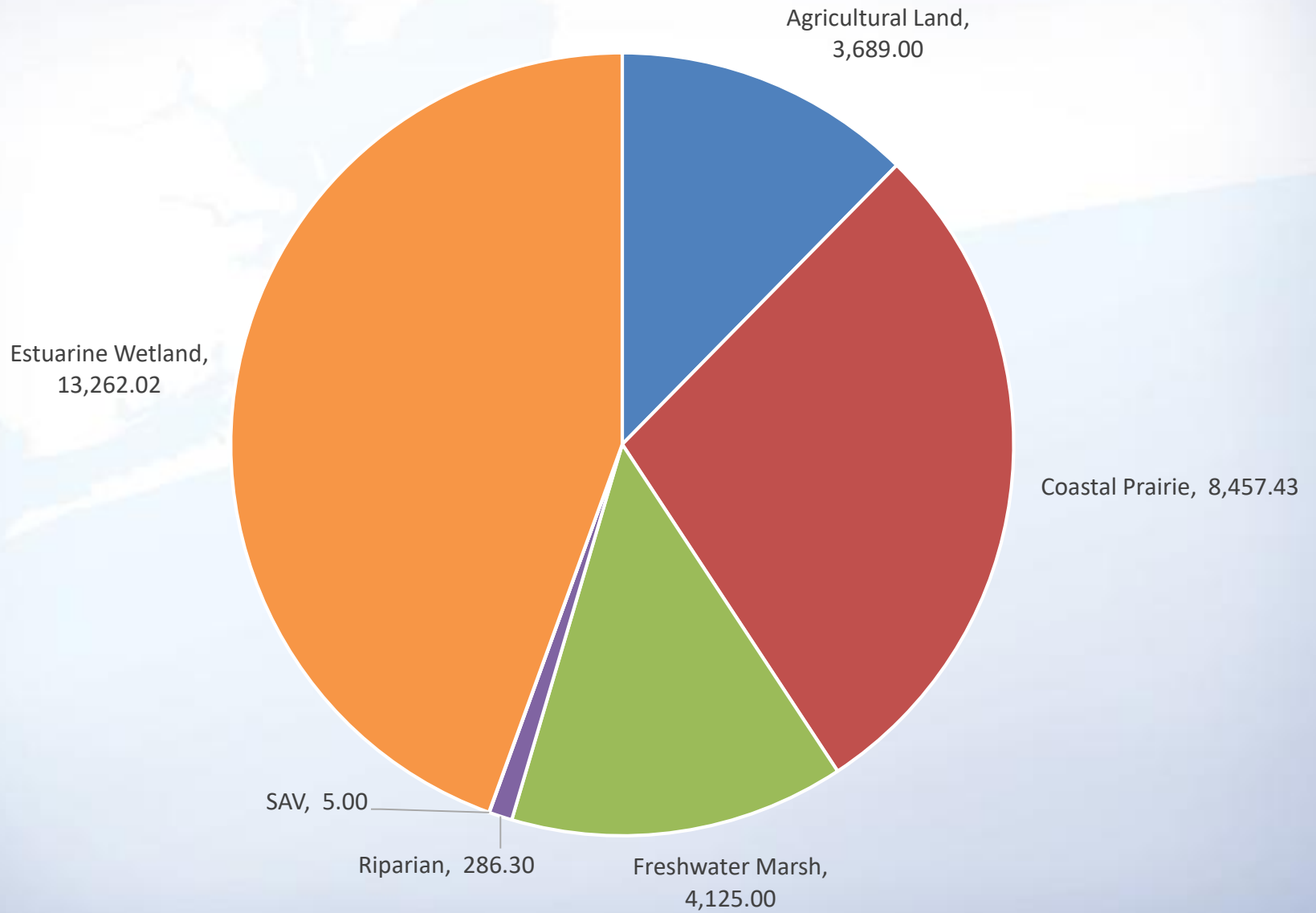
- Protected, restored, or enhanced **29,825** acres of coastal habitats,
- Leveraged over \$105.6 million in local, industry, state, and federal contributions.
  - For every \$1 the NRU contributes, \$11.13 is leveraged for conservation.



## Conservation (Acres) by Activity Type



## Conservation (Acres) by Habitat Type







# National Wetlands Inventory

surface waters and wetlands

ABOUT

GET DATA

PRINT

FIND LOCATION

BASEMAPS >

MAP LAYERS >

- ☒ Wetlands 1 2
- ☐ Riparian 1 2
- ☐ Riparian Mapping Areas 1 2
- ☒ Data Source 1 2
  - ☐ Source Type
  - ☐ Image Scale
  - ☐ Image Year
- ☐ Areas of Interest 2
- ☐ FWS Managed Lands 1 2
- ☐ Historic Wetland Data 1 2

+ Measure



LEGEND



U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov | US...

POWERED BY  
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- Action Items reduced from 35 to 9.
  - GBP'95 items reviewed by the NRU subcommittee for status and relevance.
- Developed by following SMART goals;
  - Specific, Measurable, Attainable, Relevant and Timely

Habitat Conservation	Habitat Protection (GBP)	Habitat and Landscape-Level Conservation (SAP)	NRU Ability to Implement?	Comments		
Galveston Bay Plan (1995)						
HP-3	Inventory degraded wetlands and fund remedial measures		N/A - Complete	Habitat Conservation Blueprint was the inventory - being implemented, but not really a valuable task as written, and covered under HP-1		
HP-4	Implement a coordinated system-wide wetland regulatory strategy		N/A - Complete	Section 404 of the Clean Water Act		
HP-6	Develop economic and tax incentive programs to protect wetlands		Unrealistic	Out of GBEP control - Programs that are realistic are being implemented through tax code (NRCS, Wildlife Exemptions, PDR's, etc.) - Subject to changes by Legislature		
HP-7	Facilitate bird nesting on existing islands and beaches		YES	Same comment for both... Absorbed into...		
HP-8	Build nesting islands using dredged materials		YES	1. Habitat Enhancement/Restoration Objectives of the Habitat Conservation Focus Area as "important coastal habitat" and 2. Native Species Management Objective of the Species Conservation Focus Area through funding projects that "sustain and restore native species"		
HP-9	Reduce erosional impacts on wetlands and habitat		YES			
		Species Conservation Galveston Bay Plan (1995)	Species Population Protection (GBP)	Sustaining Species Populations (SAP)	NRU Ability to Implement?	Comments
Strategic Action Plan (2009)		SP-1	Implement a year-wide effort to strengthen species management		Yes	Addressed in the revision in general, BUT language has been revised
Freshwater Inflows	Freshwater Inflow and Bay Circulation (GBP)	Habitat and Landscape-Level Conservation (SAP)	NRU Ability to Implement?	Comments	Court case determined shellfish property of estuary, not water, this is not GBEP	
Galveston Bay Plan (1995)					Not really controllable, but if not GBEP, it is covered by TPWD, BUT I don't think those action items are the greatest for NRU's Role. In addition, water management on restoration is covered as being absorbed into...	
FV-1	Complete current studies to determine freshwater inflow needs for the bay		N/A	Covered by M&R - NRU can recommend, but not really controllable. Monitoring and Research objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation	Habitat Enhancement/Restoration Objective of the Habitat Conservation Focus Area as "important coastal habitat" and	
FV-2	Expand streamflow, sediment loading, and rainfall monitoring		N/A	Covered by M&R - NRU can recommend, but not really controllable. Monitoring and Research objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation	Native Species Management Objective of the Species Conservation Focus Area through funding projects that "sustain and restore native species"	
FV-3	Establish management strategies for meeting freshwater inflow needs		N/A; Complete	Complete: SB-3 process	Not out of GBEP's control (regulatory). But	
FV-4	Establish inflow regulations to protect the ecological needs of the estuary		N/A; Complete	Complete: SB-3 process	Not out of GBEP's control (regulatory). But	
FV-5	Explore means of providing sediment to the estuary		N/A	Covered by M&R - NRU can recommend, but not really controllable. Monitoring and Research objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation	covered by FPE - Education and Outreach objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation	
FV-6	Reduce water consumption		N/A	Outreach can be done, but this is not an NRU goal	Not out of GBEP's control (regulatory) - TDB & TPWD	
FV-7	Evaluate the effects of channels and structures on bay circulation, habitats, and species		N/A	Covered by M&R - NRU can recommend, but not really controllable. Monitoring and Research objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation/Coastal Texas Mega	Not out of GBEP's control (regulatory). But	
Strategic Action Plan (2009)					Not out of GBEP's control (regulatory). But	
Goal 1	Ensure freshwater inflows necessary to maintain the balance of salinity, nutrients, and sediments required to support a productive estuary				covered by FPE - Education and Outreach objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation	
Obj. A	Support GBFIC to provide a forum for discussion on regional and state water management policy, and to develop and implement strategies for ensuring adequate freshwater inflows to Galveston Bay		Yes...	In revision, now refers to SB-3 groups (BBAS/BBEET)	covered by FPE - Education and Outreach objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation	
Obj. B	Support further research to understand the annual and seasonal freshwater inflow needs for Galveston Bay, as well as information needed to develop management strategies.		N/A	Covered by M&R - NRU can recommend, but not really controllable. Monitoring and Research objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation	covered by FPE - NRU can recommend, but not really controllable. Education and Outreach objectives removed from all NRU Focus Area Plans as these are recommended to the support committees for implementation	
Obj. C	Develop or support outreach initiatives that promote water conservation and educate the public on the value and importance of freshwater inflows		N/A	Covered by FPE - NRU can recommend, but not really controllable. Education and Outreach objectives removed from all NRU Focus Area Plans as these are recommended to the support	covered by FPE - NRU can recommend, but not really controllable. Education and Outreach objectives removed from all NRU Focus Area Plans as these are recommended to the support	



# Living Resource Action Plans

1995 CCMP Action Plans and Actions			2018 CCMP Revision Action Numbers		
Action Plan	Action Number	Action Description	Plan Priority Area	Action Number	Principal Action Section
HABITAT PROTECTION	HP-1	Restore, Create, and Protect Wetlands	PROTECT AND SUSTAIN LIVING RESOURCES	HC-1, HC-2, HC-3	Support Habitat Conservation, pg. 75.
	HP-2	Promote Beneficial Uses of Dredged Material to Restore and Create Wetlands		HC-1, HC-2	Support Habitat Conservation, pg. 75.
	HP-3	Inventory Degraded Wetlands and Fund Remedial Measures		Complete	Support Habitat Conservation, pg. 75.
	HP-4	Implement a Coordinated System-Wide Wetland Regulatory Strategy		Complete	Section 404 of the Clean Water Act.
	HP-5	Acquire and Protect Quality Wetlands		HC-1	Support Habitat Conservation, pg. 75.
	HP-6	Develop Economic and Tax Incentive Programs to Protect Wetlands		Not Applicable	Legislative institutions address development of incentives, and are subject to change during legislative sessions.
	HP-7	Facilitate Bird Nesting on Existing Sites		HC-2, HC-3, SC-1	Support Habitat Conservation, pg. 75.
	HP-8	Build Nesting Islands Using Dredged Material		HC-2, SC-1	Support Habitat Conservation, pg. 75.
	HP-9	Reduce Erosional Impacts on Wetlands and Habitats		HC-2, HC-3	Support Habitat Conservation, pg. 75.
SPECIES POPULATION PROTECTION	SP-1	Implement a Bay-Wide Effort to Strengthen Species Management	PROTECT AND SUSTAIN LIVING RESOURCES	SC-1, RES-1*	Support Species Conservation, pg. 83.
	SP-2	Return Oyster Shell to Designated Locations Within the Bay		HC-2, HC-3, SC-1	Support Habitat Conservation, pg. 75.
	SP-3	Promote the Development of Oyster Reefs Using Alternate Materials		HC-2, HC-3, RES-1*	Support Habitat Conservation, pg. 75.
	SP-4	Set Aside a Portion of Reef Habitat as Scientific Research Areas or Preserves		HC-1, SC-1, RES-1*	Support Habitat Conservation, pg. 75.
	SP-5	Encourage Continued Development of Gear to Reduce Commercial By-Catch		Complete	National Bycatch Reduction Strategy.
	SP-6	Conduct Educational programs About Catch and Release		PEA-2*, PEA-3*	Support Public Education and Awareness Initiatives, pg. 113.
	SP-7	Investigate Potential Measures to Reduce Impingement and Entrainment		Complete	Section 316(b) of Clean Water Act
	SP-8	Develop Management Plans for Endangered or Threatened Species		Complete	Regulatory organizations address development of plans.
	SP-9	Improve Enforcement of Prohibitions Against Introductions of Exotic Species		Complete	TPWD and TDA designated to regulate/enforce introductions.
	SP-10	Identify and Implement Techniques for the Control of Problem Exotic Species		SC-2, RES-1*, RES-2*	Support Species Conservation, pg. 83.



# Living Resource Action Plans

1995 CCMP Action Plans and Actions			2018 CCMP Revision Action Numbers		
Action Plan	Action Number	Action Description	Plan Priority Area	Action Number	Principal Action Section
FRESHWATER INFLOW AND BAY CIRCULATION	FW-1	Complete Current Studies to Determine Freshwater Inflow Needs for the Bay	PROTECT AND SUSTAIN LIVING RESOURCES	FWI-2, RES-3*	Sustain Freshwater Inflows, pg. 91.
	FW-2	Expand Streamflow, Sediment Load, and Rainfall Monitoring		FWI-2, RES-3*	Sustain Freshwater Inflows, pg. 91.
	FW-3	Establish Management Strategies for Meeting Freshwater Inflow Needs		FWI-1	Sustain Freshwater Inflows, pg. 91.
	FW-4	Establish Inflow Regulations to Protect the Ecological Needs of the Estuary		FWI-1	Sustain Freshwater Inflows, pg. 91.
	FW-5	Explore Means of Providing Sediment to the Estuary		FWI-2, RES-3*	Sustain Freshwater Inflows, pg. 91.
	FW-6	Reduce Water Consumption		FWI-3, PEA-2*	Sustain Freshwater Inflows, pg. 91.
	FW-7	Evaluate the Effects of Channels and Structures on Bay Circulation, Habitats and Species		RES-3*	Collaborate with Research Institutions to Support Focus Area Applied Research and Monitoring, pg. 125.
SPILLS/DUMPING	SD-1	Promote Planning to Facilitate Natural Resource Damage Assessments	PROTECT AND SUSTAIN LIVING RESOURCES	Complete	NRDA trustees participate in GBC planning process.
	SD-2	Identify Simplified Damage Assessment Procedures for Small Oil Spills		Complete	Requirement of NRDA and regulated by CG and GLO.
	SD-3	Facilitate Effective Restoration of Galveston Bay's Natural Resources Damaged by Spills		HC-2, HC-3	Support Habitat Conservation, pg. 75.
	SD-4	Facilitate Spill Cleanup by Advance Shoreline Characterization		Complete	GLO Oil Spill Tool Kit and NOAA Environmental Sensitivity Maps
	SD-5	Improve Trash Management Near the Shoreline	ENSURE SAFE HUMAN AND AQUATIC LIFE USE	PS-1	Improve Water Quality Through Point Source Pollution Abatement, pg. 53.
	SD-6	Remove Trash from Storm Water Discharges		PS-1	Improve Water Quality Through Point Source Pollution Abatement, pg. 53.
	SD-7	Publicize Environmental Harm Caused by Illegal Dumping		PS-1, SPO-3*, SPO-4*, PEA-1-3*	Improve Water Quality Through Point Source Pollution Abatement, pg. 53.
SHORELINE MANAGEMENT	SM-1	Establish a Planning Program for Shoreline Development	PROTECT AND SUSTAIN LIVING RESOURCES	Not Applicable	Action not selected by stakeholders as a priority in 2018 CCMP; will be reevaluated for inclusion in future revisions.
	SM-2	Identify Appropriate Residential Shoreline Development Guidelines		Not Applicable	Action not selected by stakeholders as a priority in 2018 CCMP; will be reevaluated for inclusion in future revisions.
	SM-3	Identify Appropriate Commercial and Industrial Shoreline Development Guidelines		Not Applicable	Action not selected by stakeholders as a priority in 2018 CCMP; will be reevaluated for inclusion in future revisions.
	SM-4	Minimize Negative Effects of Structures and Dredging on Publicly Owned Lands		RES-3*	Collaborate with Research Institutions to Support Focus Area Applied Research and Monitoring, pg. 125.
	SM-5	Improve Access to Publicly Owned Shorelines		Not Applicable	Action not selected by stakeholders as a priority in 2018 CCMP; will be reevaluated for inclusion in future revisions.

# Habitat Conservation

HC-1: Land Acquisition		
Activities	Timeframe and Output(s)	Performance Measures
Active CAP initiatives in each sub-bay watershed of Galveston Bay	Within 2-5 years, create and maintain list of acquisition projects to submit for funding.	1. List of acquisition projects. 2. Number of conservation initiative white papers completed. 3. Number of acres of habitat under permanent conservation.
Adapt acquisition projects for submission to multiple funding opportunities.	Within 5-10 years, develop conservation initiative white papers for targeted sub-bay watersheds.	
Adapt acquisition projects for submission to multiple funding opportunities.	Within 5-10 years, continue the GBEP programmatic support for the CAP in the watershed.	
Adapt acquisition projects for submission to multiple funding opportunities.	Within 5-10 years, develop grant proposals and funding strategies for acquisition projects.	
Adapt acquisition projects for submission to multiple funding opportunities.	Within 10-plus years, place 5,000 acres of important coastal habitat under long-term conservation through fee-simple acquisition, conservation easements, and other mechanisms.	
HC-2: Habitat Restoration		
Activities	Timeframe and Output(s)	Performance Measures
Active restoration plan in each sub-bay watershed of Galveston Bay	Within 2-5 years, identify coastal areas to target for restoration of lost or degraded coastal habitats, using 1950s aerial imagery as a benchmark.	1. Habitat Conservation Blueprint (HC-2 and HC-3) updated. 2. Number of acres of restored land.
Adapt restoration projects for submission to multiple funding opportunities.	Within 5-10 years, develop funding strategies for restoration projects that can be adapted to multiple funding sources.	
Adapt restoration projects for submission to multiple funding opportunities.	Within 10-plus years, restore 2,500 acres of lost or degraded coastal habitats.	
HC-3: Habitat Enhancement		
Activities	Timeframe and Output(s)	Performance Measures
Active enhancement plan in each sub-bay watershed of Galveston Bay.	Within 2-5 years, identify important coastal areas to target for enhancement of degraded coastal habitats.	1. Habitat Conservation Blueprint (HC-2 and HC-3) updated. 2. Number of acres of enhanced land.
Adapt enhancement projects for submission to multiple funding opportunities.	Within 5-10 years, develop funding strategies for enhancement projects that can be adapted to multiple funding sources.	
Adapt enhancement projects for submission to multiple funding opportunities.	Within 10-plus years, enhance 5,000 acres of lost or degraded coastal habitats.	

# Species Conservation

SC-1: Native Species Management		
Activities	Timeframe and Output(s)	Performance Measures
Support native species conservation projects on public and private lands.	Within 2-5 years, develop habitat conservation projects based on species needs.	1. Habitat Conservation Blueprint (HC-2 and HC-3) updated. 2. Number of projects with native species managed and enhanced.
Support native species conservation projects on public and private lands.	Within 5-10 years, continue to develop habitat conservation projects based on species needs.	
Support native species conservation projects on public and private lands.	Within 10-plus years, continue to develop habitat conservation projects based on species needs.	
SC-2: Invasive Species Control		
Activities	Timeframe and Output(s)	Performance Measures
Support invasive species management on public and private lands.	Within 2-5 years, identify important coastal areas to target for enhancement of degraded coastal habitats.	1. Habitat Conservation Blueprint (HC-2 and HC-3) updated. 2. Number of projects with invasive species managed, including the type and amount of invasives completed.
Support invasive species management on public and private lands.	Within 5-10 years, develop funding strategies for enhancement projects that can be adapted to multiple funding sources.	
Support invasive species management on public and private lands.	Within 10-plus years, enhance 5,000 acres of lost or degraded coastal habitats (please see HC-3).	

# Freshwater Inflows

## FWI-1: Regional Planning for Freshwater Inflows

Activities	Timeframe and Output(s)	Performance Measures
Develop partnerships to inform public of opportunities to comment on regional water planning.	Within 2-5 years, identify opportunities to participate in the regional water planning processes to ensure the rules that govern the regional water plans better protect water for wildlife (specific goals to be determined, could include increasing the number of partners each year).	<ol style="list-style-type: none"> <li>1. Plan to address key issues of fresh water inflows completed.</li> <li>2. Number of resource materials developed to address key issues of fresh water inflows.</li> <li>3. Number of people reached with fresh water inflow resource materials and outreach.</li> </ol>
Develop partnerships to inform public of opportunities to comment on regional water planning.	Within 5-10 years, work with partners to create a plan and materials to address key issues.	
Develop partnerships to inform public of opportunities to comment on regional water planning.	Within 10-plus years, see completion of plan items to address key issues.	

## FWI-2: Freshwater Inflows Research and Management

Activities	Timeframe and Output(s)	Performance Measures
Support research to understand the annual and seasonal freshwater inflow needs for Galveston Bay, as well as information needed to develop management strategies.	Within 2-5 years, present at the State of the Bay Symposia.	<ol style="list-style-type: none"> <li>1. Number of research studies addressing the annual and seasonal freshwater inflow and freshwater management needs of Galveston Bay completed.</li> <li>2. Number of freshwater inflow white papers, presentations, and workshops completed.</li> <li>3. Number of GBEP website visits.</li> </ol>
Support research to understand the annual and seasonal freshwater inflow needs for Galveston Bay, as well as information needed to develop management strategies.	Within 2-5 years, collect data and share results and partner publications on the GBEP website.	
Support research to understand the annual and seasonal freshwater inflow needs for Galveston Bay, as well as information needed to develop management strategies.	Within 2-5 years, provide support on the development and public delivery of white papers, technical presentations, and workshops (number TBD).	
Support research to understand the annual and seasonal freshwater inflow needs for Galveston Bay, as well as information needed to develop management strategies.	On a cycle of every 5-10 years, use research data to contribute to the State of the Bay Report.	

## FWI-3: Water Conservation and Education

Activities	Timeframe and Output(s)	Performance Measures
Develop or support outreach initiatives that promote water conservation and educate the public on the value and importance of freshwater inflows.	Within 2-5 years, create a regional initiatives plan that supports water conservation and the value of freshwater inflows (specific goals to be determined, could include increasing the number of partners each year).	<ol style="list-style-type: none"> <li>1. Regional plan for water conservation completed.</li> <li>2. Number of partners supporting the water conservation plan.</li> <li>3. Number of regional plan initiatives completed.</li> </ol>
Develop or support outreach initiatives that promote water conservation and educate the public on the value and importance of freshwater inflows.	Within 5-10 years, see significant progress on regional initiatives plan items (50% of goals met).	
Develop or support outreach initiatives that promote water conservation and educate the public on the value and importance of freshwater inflows.	Within 10-plus years, see completion of all regional initiatives plan items (100% of goals met).	



# FY 2021 Priorities for NRU

- Land acquisition;
- Benefit to Federal and State Listed Species or Species of Greatest Conservation Need; and/or
- Brings funding or work leverage to the subcommittee

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